



The schematic diagram illustrates a mechanical system for a first embodiment. It features a central vertical shaft (12a) with a hand wheel (20a) at the top, which can rotate in two directions as indicated by curved arrows (18a). The shaft passes through a coupler (60a) and a motor (58a). The motor is connected to a controller (56a), which is in turn connected to sensors (62a). The entire system is powered by a power source (10a). The shaft (12a) is connected to a gear (30a) which meshes with a rack (28a). The rack is connected to a lever (24a) which is pivoted at one end (26a) and has a weight (32a) attached to its other end. The lever is also connected to a spring (34a) which is attached to a fixed support (36a). The lever is further connected to a piston (38a) which is part of a hydraulic cylinder (22a). The piston is connected to a fixed support (24a) via a lever (26a) and a weight (32a).

FIG. 4

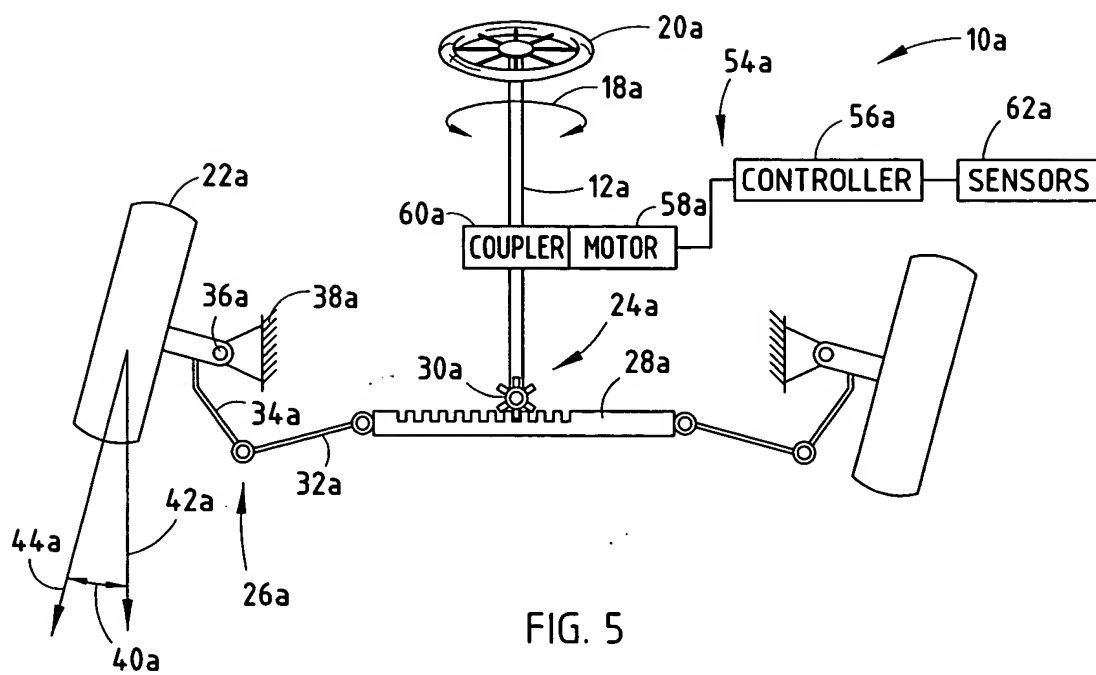


FIG. 5